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09/490,836	01/25/2000	John O. Ryan	M.8284-US	7711

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EXAMINER
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SANTOS, PATRICK J D

ART UNIT	PAPER NUMBER
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2171

DATE MAILED: 09/09/2004

15

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/490,836

Applicant(s)

RYAN ET AL.

Examiner

Patrick J Santos

Art Unit

2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 28 April 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-6 and 8-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 8-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 January 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. New Claims 15-18 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Specifically, Claims 15-18 inherit from Claims 1, 5, 6, and 10, which disclose modifying the blanking interval of a video signal, which is part of the baseband (Claim 1, ln. 8; Claim 5, ln. 3, Claim 6, ln. 11, and Claim 10, ln. 3). However, Claims 15-18 disclose modifying an arbitrary portion of the baseband (Claim 15, ln. 2, Claim 16, ln. 2, Claim 17, ln. 2, Claim 18, ln. 2), thus being further broadening rather than further limiting.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 6, 9, 11, 13, 15, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,410,601 issued to Hashimoto (hereafter Hashimoto '601) in view of U.S. Patent No. 6,357,046 issued to Thompson et al. (hereafter Thompson '046).

Claim 1:

Regarding Claim 1, Hashimoto '601 discloses a video signal scrambling system in which a cryptographic key is embedded in the blanking interval. Specifically, Hashimoto '601 discloses: a method of transmitting data in a video signal (Hashimoto '601: Abstract), comprising the acts of:

- providing the data (Hashimoto '601: col. 10, lns. 41-45; col. 20, lns. 35-36; );
- encoding the data (Hashimoto '601: col. 10, lns. 45-51; col. 20, lns. 37-40);
- modifying a predetermined part of the video signal by inserting therein the encoded data (Hashimoto '601: col. 10, lns. 49-51; col. 20, lns. 41-43); and
- transmitting the modified signal (Hashimoto '601: col. 10, ln. 51; col. 19, lns. 9-16);
- wherein the predetermined part is in a blanking interval of the video signal (Hashimoto '601: col. 10, lns. 45-62).

However, Hashimoto '601 does not explicitly disclose:

- wherein the predetermined part of the modified signal is not recorded by particular video recorders.

Thompson '046 discloses video security system. Specifically, Thompson '046 discloses: wherein the predetermined part of the modified signal is not recorded by particular video recorders (Thompson '046: col. 2, ln. 64 to col. 3, ln. 13 – note that the Thompson '046 system scans frequencies, including those that are beyond the recording means of particular video recorders).

It would have been obvious to a person having ordinary skill in the art to apply the video security system of Thompson '046 to the video scrambling system of Hashimoto '601. The

motivation to combine is suggested by Thompson '046 which discloses that application of the system of Thompson '046 provides a particularly flexible security means for video data such as that of Hashimoto '601 (Thompson '046: col. 2, lns. 25-37).

Claim 6:

Regarding Claim 6, Hashimoto '601 discloses an encoder for transmitting data encoded in a video signal comprising:

- an input video terminal for receiving a video signal (Hashimoto '601: Fig. 5, note item marked "Video In");
- an input data terminal for receiving the data (Hashimoto '601: Fig. 5, items 9-12);
- a sync separator coupled to the input video terminal (Hashimoto '601: Fig. 5, item 6);
- encoding circuitry coupled to the data input terminal and the sync separator, thereby to encode the data (Hashimoto '601: Fig. 5, items 8-12); and
- a summer coupled to the encoding circuitry and the input video terminal, and outputting the video signal having a predetermined part thereby modified by the encoded data (Hashimoto '601: Fig. 5, items 8-12);
- wherein the predetermined part of the modified video signal is in a blanking interval of the video signal (Hashimoto '601: col. 10, lns. 45-62).

Hashimoto '601 does not explicitly disclose the predetermined part of the modified video signal is not recorded by particular video recorders.

Thompson '046 discloses video security system. Specifically, Thompson '046 discloses: wherein the predetermined part of the modified signal is not recorded by particular video recorders (Thompson '046: col. 2, ln. 64 to col. 3, ln. 13 – note that the Thompson '046 system

scans frequencies, including those that are beyond the recording means of particular video recorders).

It would have been obvious to a person having ordinary skill in the art to apply the video security system of Thompson '046 to the video scrambling system of Hashimoto '601. The motivation to combine is on the same basis as Claim 1 (supra).

Claims 4 and 9:

Regarding Claims 4 and 9, Hashimoto '601 and Thompson '046 in combination disclose all the limitations of Claims 1 and 6 (supra). Additionally, Furthermore, Hashimoto '601 and Thompson '046 in combination further disclose: the predetermined part is above a predetermined frequency (Thompson '046: col. 2, ln. 64 to col. 3, ln. 13 – note that the Thompson '046 system scans frequencies, including those above a predetermined frequency to obtain data).

Claims 11 and 13:

Regarding Claims 11 and 13, Hashimoto '601 and Thompson '046 in combination disclose all the limitations of Claims 1 and 6 (supra). Additionally, Hashimoto '601 and Thompson '046 in combination further disclose: wherein the data is a key for descrambling or decrypting the video signal (Hashimoto '601: col. 10, lns. 46-62).

Claims 15 and 17:

Regarding Claims 15 and 17, Hashimoto '601 and Thompson '046 in combination disclose all the limitations of Claims 1 and 6 (supra). Examiner notes that the modified blanking interval as recited in Claims 1 and 6 (supra), is in the baseband as recited in Claims 15 and 17. Refer to Claim objections to Claim 15 and 17 (supra).

4. Claims 3, 5, 8, 10, 12, 14, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hashimoto '601 in view of U.S. Patent No. 4,849,836 issued to Kachikian (hereafter Kachikian '836).

Claim 3:

Regarding Claim 3, Hashimoto '601 discloses a video signal scrambling system in which a cryptographic key is embedded in the blanking interval. Specifically, Hashimoto '601 discloses: a method of transmitting data in a video signal (Hashimoto '601: Abstract), comprising the acts of:

- providing the data (Hashimoto '601: col. 10, lns. 41-45; col. 20, lns. 35-36; );
- encoding the data (Hashimoto '601: col. 10, lns. 45-51; col. 20, lns. 37-40);
- modifying a predetermined part of the video signal by inserting therein the encoded data (Hashimoto '601: col. 10, lns. 49-51; col. 20, lns. 41-43); and
- transmitting the modified signal (Hashimoto '601: col. 10, ln. 51; col. 19, lns. 9-16).

However, Hashimoto '601 does not explicitly disclose: wherein the predetermined part is in also below a selected voltage level.

Kachikian '836 discloses the cryptographic technique of "weak bits" in which the voltage of a signal is lowered as to provide an ambiguous value to a reader (Kachikian '836: col. 2, ln. 60 to col. 3, ln. 9).

It would have been obvious to a person having ordinary skill in the art to apply the weak bits of Kachikian '836 to the video signal scrambling system of Hashimoto '601. The motivation to combine is suggested by Kachikian '836 which discloses that the technique of Kachikian '836

provides a particularly economical security means to data such as Hashimoto '601 (Kachikian '836: col. 1, lns. 55-68).

Claim 5:

Regarding Claim 5, Hashimoto '601 discloses: a method of receiving data encoded in a modified video signal wherein the data in a predetermined part of the video signal and is in a blanking interval of the video signal or is below a selected voltage level, comprising the acts of:

- receiving the modified video signal (Hashimoto '601: col. 19, lns. 17-30);
- transmitting the video portion of the modified signal (Hashimoto '601: col. 19, lns. 17-30);
- extracting the encoded data from the modified video signal (Hashimoto '601: col. 19, lns. 17-30); and
- decoding the extracted data (Hashimoto '601: col. 19, lns. 17-30).

However, Hashimoto '601 does not explicitly disclose that the predetermined part is not recorded by particular video recorders.

Kachikian '836 discloses the cryptographic technique of "weak bits" in which the voltage of a signal is lowered as to provide an ambiguous value to a reader (Kachikian '836: col. 2, ln. 60 to col. 3, ln. 9).

It would have been obvious to a person having ordinary skill in the art to apply the weak bits of Kachikian '836 to the video signal scrambling system of Hashimoto '601. The motivation to combine is on the same basis as Claim 3 (supra).

Claim 8:



Regarding Claim 8, Hashimoto '601 discloses: an encoder for transmitting data in a video signal comprising:

- an input video terminal for receiving the video signal (Hashimoto '601: Fig. 5, note item marked "Video In");
- an input data terminal for receiving the data (Hashimoto '601: Fig. 5, items 9-12);
- a sync separator coupled to the input video terminal (Hashimoto '601: Fig. 5, item 6);
- encoding circuitry coupled to the data input terminal and the sync separator, thereby to encode the data (Hashimoto '601: Fig. 5, items 8-12); and
- a summer coupled to the encoding circuitry and the input video terminal, and outputting the video signal having a predetermined part thereof modified by the encoded data (Hashimoto '601: Fig. 5, items 8-12);
- where the predetermined part of the modified video signal and is in a blanking interval of the video signal (Hashimoto '601: col. 10, lns. 45-62).

Hashimoto '601 does not explicitly disclose that the predetermined part is not recorded by particular video recorders.

Kachikian '836 discloses the cryptographic technique of "weak bits" in which the voltage of a signal is lowered as to provide an ambiguous value to a reader (Kachikian '836: col. 2, ln. 60 to col. 3, ln. 9).

It would have been obvious to a person having ordinary skill in the art to apply the weak bits of Kachikian '836 to the video signal scrambling system of Hashimoto '601. The motivation to combine is on the same basis as Claim 3 (*supra*).

Claim 10:

Regarding Claim 10, Hashimoto '601 discloses: a decoder for receiving data in a modified video signal wherein the data is encoded into a predetermined portion of the video signal and is in the blanking interval of the video signal or is below a selected voltage level, comprising:

- a video input terminal for receiving the modified video signal (Hashimoto '601: Fig. 33, note item "Video In");
- a video output terminal coupled to the input terminal (Hashimoto '601: Fig. 33, note item marked "Video Out");
- extraction circuitry having an input terminal coupled to the video input terminal and which extracts the data from the predetermined portion of the modified video signal (Hashimoto '601: Fig. 33, items 8-12); and
- a data output terminal coupled to the extraction circuitry to output the extracted data (Hashimoto '601: Fig. 33, note item marked "Video Out").

However, Hashimoto '601 does not explicitly disclose that the predetermined portion of the video signal is not recorded by particular video recorders.

Kachikian '836 discloses the cryptographic technique of "weak bits" in which the voltage of a signal is lowered as to provide an ambiguous value to a reader (Kachikian '836: col. 2, ln. 60 to col. 3, ln. 9).

It would have been obvious to a person having ordinary skill in the art to apply the weak bits of Kachikian '836 to the video signal scrambling system of Hashimoto '601. The motivation to combine is on the same basis as Claim 3 (*supra*).

Claims 12 and 14:

Regarding Claims 12 and 14, Hashimoto '601 and Kachikian '836 in combination disclose all the limitations of Claims 5 and 10 (supra). Additionally, Hashimoto '601 and Kachikian '836 in combination further disclose: wherein the data is a key for descrambling or decrypting the video signal (Hashimoto '601: col. 10, lns. 46-62).

Claims 16 and 18:

Regarding Claims 16 and 18, Hashimoto '601 and Kachikian '836 in combination disclose all the limitations of Claims 5 and 10 (supra). Examiner notes that the modified blanking interval as recited in Claims 5 and 10 (supra), is in the baseband as recited in Claims 16 and 18. Refer to Claim objections to Claim 16 and 18 (supra).

***Response to Arguments***

5. Applicant's arguments with respect to Claims 1-14 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J Santos whose telephone number is 703-305-0707. The examiner can normally be reached on M-F 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic can be reached on 703-308-1436. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2171

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Patrick J.D. Santos  
August 31, 2004

  
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